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SUPERFUND DIVISION

NOTIFICATION OF TREATMENT FOR CHARACTERISTIC HAZARDOUS
WASTE SUBMITTED IN ACCORDANCE WITH 40 CFR 268.7

Baerbel Schiller
RCRA Branch Chief
EPA Region VII
726 Minnesota Avenue
Kansas City, KS 66101

This notification of treatment of characteristic hazardous waste is submitted in accordance with the notification requirements of 40 CFR 268.7 ((FR 55, No. 106, P. 22531, June 1, 1990).

Generator: Boyles Galvanizing
Address: 1461 Kinark Court
St. Louis, MO 63132
Contact: Jim Jones
Phone: 314/993-1562
EPA I.D. #: MOD006284335

The above named facility has contracted with Heritage Environmental Services, Inc. to provide on-site treatment of characteristic hazardous wastes in accordance with the provisions of 40 CFR 262.34, 268.7, 268.9. This waste is not a listed waste and will be treated within the generator's 90 day accumulation period.

Wastestream Name: Stabilized preflux sludge

Process Generating Waste: Sludge from galvanizing preflux tank generated by precipitation of iron from the preflux solution of zinc chloride. Will be treated by sulfide precipitation and solidified with cement kiln dust and fly ash.

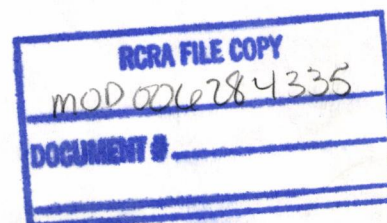
Container Type: 20 cu. yd. boxes

() One-Time estimated volume: _____

(x) On-Going generation: 100 cu. yds./yr.

Characteristic waste code(s): D008

Treatment Use: () Neutralization
() Cyanide destruction
(x) Stabilization
(x) Solidification
() Other _____



R00116428
RCRA RECORDS CENTER

Subtitle D facility that will receive the waste:

Laidlaw Waste Systems

Bridgeton Landfill

This waste will be treated and sampled in accordance with the attached sample plan.

✓ Authorized Generator Signature: *Jim Jones*
✓ Printed Name and Title: Jim Jones General Manager
✓ Date: 6-20-96

Attachments:

1. Waste analysis plan
2. Laboratory analysis of untreated waste
3. Analysis of treated waste

Contractor technical contact:

Mr. Jay S. Taylor
Heritage Environmental Services, Inc.
5443 S. 99th East Avenue
Tulsa, OK 74146

Telephone # 918-627-2671

WASTE ANALYSIS PLAN FOR TREATED CHARACTERISTIC
HAZARDOUS WASTE SUBMITTED IN ACCORDANCE WITH
40 CFR 267.8 (FR 55, NO. 106, P. 22670, JUNE 1, 1990)

Waste Name: Stabilized preflux sludge

Generator: Boyles Galvanizing

Analysis on a representative sample of untreated waste:

See Attached.

Testing on treated sample of waste:

Samples of each 20 cu. yd. container will be tested for RCI and TCLP
Pb.

Analysis of treated waste:

Waste Code Untreated Waste:

D008

Treatment Limits:

5 ppm

Certification: Composites of treated waste will be tested before it is shipped to a Subtitle D Landfill.

I certify under penalty of law, that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification, and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the performance levels specified in 40 CFR 268.32 or RCRA Section 3004(d) without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

Generator: Boyles Galvanizing Phone: 314-993-1562

Contractor Tech. Contact: Jay Taylor
Heritage Environmental Services, Inc.
5443 S. 99th East Avenue
Tulsa, OK 74146

(918)627-2671

C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	Received	Project	Lab ID
	20-MAY-96		A375549
	Complete	PO Number	
	24-MAY-96	VERBAL	
	Printed	Sampled	
	25-MAY-96	17-MAY-96 10:00	

Report To ROCKY SKEANS HERITAGE 5443 S. 99TH EAST AVENUE TULSA, OK 74146	Bill To JAY TAYLOR HERITAGE ENVIRONMENTAL SERVICES, INC. 5443 SOUTH 99TH EAST AVENUE TULSA, OK 74146
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Sample Description CLIENT ID: ROGER; ST. LOUIS; DESCRIPTION: PRE-FLUX SLUDGE JOB #: NA	
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TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311			
Analyst: L. HUFFMAN	Analysis Date: 21-MAY-96	Instrument: PREP	Test: P106.1.0
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	511.70		Grams
LIQUID FRACTION (GRAMS)	113.80		Grams
EXTRACTED SAMPLE	100		Grams
SOLIDS	77.80		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	2.50		Std. Units
ADJUSTED PH	NA		Std. Units
BUFFER SOLUTION PH	4.92		Std. Units
FINAL PH	4.40		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	28.50		mL
TOTAL VOLUME FILTRATE	2028.5		mL
AMBIENT TEMPERATURE	23.5		Degrees C
INITIAL TIME	18674.7		HRS
FINAL TIME	18692.8		HRS
PHASE 0 VOLUME (REP 0)	NA		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A			
Analyst: S. PUGH	Analysis Date: 22-MAY-96 14:30	Instrument: PREP	Test: P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAAC ACID DIGESTION (LEACHATE) SW846-7470A

Analyst: S. BISHOP

Analysis Date: 22-MAY-96 13:00

Instrument: PREP

Test: P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		mL
FINAL VOLUME	100		mL

ARSENIC ICP (1 POINT MSA) SW846-6010A

Analyst: M. JAO

Analysis Date: 23-MAY-96 09:43

Instrument: ICP

Test: M603.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.5	mg/L
ADDITION 1	5.000		mg/L
SAMPLE	0.0067		Conc
SAMPLE + ADD 1	4.8220		Conc
DILUTION	5		

BARIUM ICP (1 POINT MSA) SW846-6010A

Analyst: M. JAO

Analysis Date: 23-MAY-96 09:43

Instrument: ICP

Test: M604.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BARIUM	1.9	0.05	mg/L
ADDITION 1	5.000		mg/L
SAMPLE	0.3750		Conc
SAMPLE + ADD 1	5.1128		Conc
DILUTION	5		

CADMIUM ICP (1 POINT MSA) SW846-6010A

Analyst: M. JAO

Analysis Date: 23-MAY-96 09:43

Instrument: ICP

Test: M608.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CADMIUM	0.23	0.05	mg/L
ADDITION 1	5.000		mg/L
SAMPLE	0.0467		Conc
SAMPLE + ADD 1	5.0634		Conc
DILUTION	5		

CHROMIUM ICP (1 POINT MSA) SW846-6010A

Analyst: M. JAO

Analysis Date: 23-MAY-96 09:43

Instrument: ICP

Test: M610.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CHROMIUM	0.12	0.05	mg/L
ADDITION 1	5.00		mg/L
SAMPLE	0.0234		Conc
SAMPLE + ADD 1	4.8081		Conc
DILUTION	5		

LEAD ICP (1 POINT MSA) SW846-6010A

Analyst: M. JAO

Analysis Date: 23-MAY-96 09:43

Instrument: ICP

Test: M616.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
LEAD	7.5	0.25	mg/L
ADDITION 1	5.000		mg/L

Parameter	Result	Det. Limit	Units
SAMPLE	1.5073		Conc
SAMPLE + ADD 1	6.4150		Conc
DILUTION	5		

SELENIUM ICP (1 POINT MSA) SW846-6010A

Analyst: M. JAO Analysis Date: 23-MAY-96 09:43 Instrument: ICP Test: M628.7.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.5	mg/L
ADDITION 1	5.000		mg/L
SAMPLE	-0.0088		Conc
SAMPLE + ADD 1	4.9118		Conc
DILUTION	5		

NICKEL ICP (1 POINT MSA) SW846-6010A

Analyst: M. JAO Analysis Date: 23-MAY-96 09:43 Instrument: ICP Test: M622.7.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
NICKEL	1.5	0.15	mg/L
ADDITION 1	5.000		mg/L
SAMPLE	0.2972		Conc
SAMPLE + ADD 1	5.0455		Conc
DILUTION	5		

SILVER ICP (1 POINT MSA) SW846-6010A

Analyst: M. JAO Analysis Date: 23-MAY-96 09:43 Instrument: ICP Test: M630.7.0
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.05	mg/L
ADDITION 1	1.000		mg/L
SAMPLE	0.0005		Conc
SAMPLE + ADD 1	0.8641		Conc
DILUTION	5		

MERCURY CVAA (1 POINT MSA) SW846-7470A

Analyst: S. BISHOP Analysis Date: 23-MAY-96 10:58 Instrument: CVAA Test: M620.6.0
 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9.0
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0050	mg/L
ADDITION 1	0.001		mg/L
SAMPLE	0.00012		Conc
SAMPLE + ADD 1	0.00108		Conc
DILUTION	1		

IGNITABILITY (SOLIDS ASSESSMENT-EXPOSURE TO SPARK) ASTM D-4982B

Analyst: K. FULLMER Analysis Date: 22-MAY-96 19:00 Test: G515.5.0

Parameter	Result	Det. Limit	Units
IGNITABILITY	NEG		
AMBIENT TEMPERATURE	72		Degrees F

PH (S/S/S) SW846-9045B

Analyst: S. PUGH

Analysis Date: 21-MAY-96 15:20

Test: G624.0.0

Parameter	Result	Det. Limit	Units
PH	2.0	0.10	Std. Units

CYANIDE, TOTAL AVAILABLE (AUTOMATED) SW 7.3.3.2

Analyst: S. PFEFFER

Analysis Date: 22-MAY-96 12:30

Instrument: AUTO-ANALYZER

Test: G115.3.0

Parameter	Result	Det. Limit	Units
REACTIVE CYANIDE	BDL	0.050	mg/kg

TOTAL AVAILABLE SULFIDE EXTRACTION SW 7.3.4.1

Analyst: K. CRAWFORD

Analysis Date: 21-MAY-96 09:00

Instrument: PREP

Test: P116.2.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	100		mL

SULFIDE SW846-9030A

Analyst: K. CRAWFORD

Analysis Date: 21-MAY-96 09:00

Test: G110.4.0

Prep: TOTAL AVAILABLE SULFIDE EXTRACTION SW 7.3.4.1 P116.2.0

Parameter	Result	Det. Limit	Units
SULFIDE	BDL	10	mg/kg

Sample Comments

PLEASE HOLD ALL REMAINDER SAMPLE, IF POSSIBLE, FOR 30 DAYS.
NEED FOR WASTESTREAM TESTING & TREATMENT CENTER.

BDL Below Detection Limit

NA Not Applicable

NEG Negative

YES Yes

Sample chain of custody number 43351.

This Certificate shall not be reproduced, except in full,
without the written approval of the lab.

Additional copies of this report sent to:

JAY TAYLOR, HERITAGE ENVIRONMENTAL SERVICES, INC.

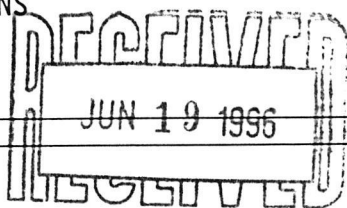
5443 SOUTH 99TH EAST AVENUE, TULSA, OK 74146

Approved :



C E R T I F I C A T E O F A N A L Y S I S

Service Location HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	Received	06-JUN-96	Project	Lab ID A376968
	Complete	13-JUN-96	PO Number VERBAL	
	Printed	14-JUN-96	Sampled 30-MAY-96	



Report To ROCKY SKEANS HERITAGE 5443 S. 99TH EAST AVENUE TULSA, OK 74146	Bill To JAY-TAYLOR HERITAGE ENVIRONMENTAL SERVICES, INC. 5443 SOUTH 99TH EAST AVENUE TULSA, OK 74146
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Sample Description CLIENT ID: BOYLES/ROGERS GALV SAMPLE ID: STAB PREFLUX SLUDGE LOCATION: ST. LOUIS JOB #: 52582
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TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311			
Analyst: L. HUFFMAN	Analysis Date: 07-JUN-96	Instrument: PREP	Test: P106.1.0
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100		Grams
LIQUID FRACTION (GRAMS)	0		Grams
EXTRACTED SAMPLE	100		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	7.9		Std. Units
ADJUSTED PH	6.6		Std. Units
BUFFER SOLUTION PH	2.87		Std. Units
FINAL PH	6.4		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	0		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23.1		Degrees C
INITIAL TIME	1161.0		HRS
FINAL TIME	1179.2		HRS
PHASE 0 VOLUME (REP 0)	NA		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A			
Analyst: S. PUGH	Analysis Date: 10-JUN-96 14:20	Instrument: PREP	Test: P130.8.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0			
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

LEAD ICP (1 POINT MSA) SW846-6010A

Analyst: A. HILSCHER

Analysis Date: 11-JUN-96 11:35

Instrument: ICP

Test: M616.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.25	mg/L
ADDITION 1	2.000		mg/L
SAMPLE	0.0216		Conc
SAMPLE + ADD 1	1.8853		Conc
DILUTION	5		

PAINT FILTER TEST SW846-9095

Analyst: L. HUFFMAN

Analysis Date: 06-JUN-96 16:00

Test: G103.1.0

Parameter	Result	Det. Limit	Units
PAINT FILTER LIQUID (TOTAL ML AFTER 5 MINUTES	BDL		mL
INITIAL SAMPLE WEIGHT	100		Grams

IGNITABILITY (SOLIDS ASSESSMENT-EXPOSURE TO SPARK) ASTM D-4982B

Analyst: K. FULLMER

Analysis Date: 10-JUN-96 10:10

Test: G515.5.0

Parameter	Result	Det. Limit	Units
IGNITABILITY	NEG		
AMBIENT TEMPERATURE	68		Degrees F

PH (S/S/S) SW846-9045B

Analyst: S. PUGH

Analysis Date: 06-JUN-96 14:30

Test: G624.0.0

Parameter	Result	Det. Limit	Units
PH	7.6	0.1	Std. Units

CYANIDE, TOTAL AVAILABLE (AUTOMATED) SW 7.3.3.2

Analyst: J. STOAKES

Analysis Date: 12-JUN-96 13:30

Instrument: AUTO-ANALYZER

Test: G115.3.0

Parameter	Result	Det. Limit	Units
REACTIVE CYANIDE	BDL	0.050	mg/kg

TOTAL AVAILABLE SULFIDE EXTRACTION SW 7.3.4.1

Analyst: K. CRAWFORD

Analysis Date: 11-JUN-96 09:45

Instrument: PREP

Test: P116.2.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	100		mL

SULFIDE SW846-9030A

Analyst: K. CRAWFORD

Analysis Date: 11-JUN-96 14:15

Test: G110.4.0

Prep: TOTAL AVAILABLE SULFIDE EXTRACTION SW 7.3.4.1 P116.2.0

Parameter	Result	Det. Limit	Units
SULFIDE	230	10	mg/kg

Sample Comments

BDL Below Detection Limit
 NA Not Applicable
 NEG Negative
 YES Yes

Sample chain of custody number 43377.

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 without the written approval of the lab.

Sample Comments

Additional copies of this report sent to:
JAY TAYLOR, HERITAGE ENVIRONMENTAL SERVICES, INC.
5443 SOUTH 99TH EAST AVENUE, TULSA, OK 74146

Approved : Brenda Laush